DELTA R

DELTA R FULL COLOR

DELTA R TRILED

DELTA 5-7 RGB R

The Lighting Company

User Manual Rel 1.4

GB

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n de los productos o de los circuitos descritos.

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1- TECHNICAL FEATURES

Delta R Full Color

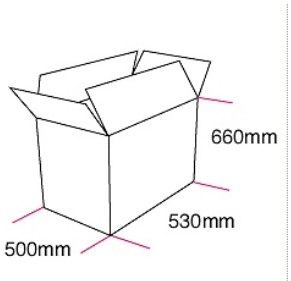
40 RGB Full Color LEDs/ LED power 3W
2.800 Lumens / 550 Lux at 5 m (Spot lenses)
RGB color generation / 16 million colours
Colour temperature variable on a linear range (3.200°K÷5.500°K)
No infrared emission / no ultraviolet emission
LEDs average lifespan: 100.000 hours
Four interchangeable optical units (Spot / Medium flood / Wide flood / Very wide flood)
Interface: OLED display + 4 buttons / infrared remote control
Control signals: USITT DMX 512 USITT serial digital signals
15 DMX channels
Independent operation (Master / Slave)
Programmable automated playback (7 days)
Movement on 3 axes : Pan 320° / Tilt1 160°(Motorized); Tilt2 135°(Manual).
Safety-locking system
IP65 protection level
Professional HARTING / ILME sockets (IP65 protection rating)
Full range AC 90-260V, 50-60Hz power supply
Operating ambient temperature -10° / 40°
Weight: 24 Kg

ACCESSORIES

Lenses set spot (cod. 03.LK.008)
Lenses set medium flood (cod. 03.LK.001)
Lenses set wide flood (cod. 03.LK.002)
Flight case for 1 DELTA (cod. 0521C029)
Flight case for 2 DELTA (cod. 0521C030)
Safety wire (3mm x 60 cm), ring spring catch (max. capacity load 60Kg) (Cod. 0521A010)
"C" Clamp GQUICK with "Fast Lock" connection ¼ turn (max. load 80Kg) (cod. 0521A014)

Dimensions (LxDxH)
projector 430 x 285 x 570 mm

Weight24 Kg (motorized version)



Packaging Dimensions (LxDxH)
530 x 500 x 660 mm

Weight 30 Kg

Delta R Triled

20 LEDs / TRILED technology / LED power 1W x 3
2.400 Lumens / 520 Lux at 5 m (spot lenses)
RGB color generation / 16 million colours
Colour temperature variable on a linear range (3.200°K÷5.500°K)
No infrared emission / no ultraviolet emission
LEDs average lifespan: 100.000 hours
Optical units can be interchanged by users (spot / medium flood / wide flood)
Interface: OLED display + 4 buttons / infrared remote control
Control signals: USITT DMX 512 USITT serial digital signals
15 DMX channels
Independent operation (Master / Slave)
Programmable automated playback (7 days)
Movement on 3 axes : Pan 320° / Tilt1 160°(Motorized); Tilt2 135°(Manual)
Safety-locking system
IP65 protection level
Professional HARTING / ILME sockets (IP65 protection rating)
Full range AC 90-260V, 50-60Hz power supply
Operating ambient temperature -10° / 40°
Weight: 24 Kg

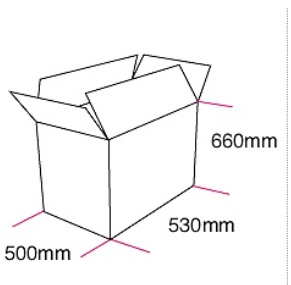
ACCESSORIES

Lenses set spot (cod. 03.LK.004)
Lenses set medium flood (cod. 03.LK.005)
Lenses set wide flood (cod. 03.LK.006)

Flight case for 1 DELTA (cod. 0521C029)
Flight case for 2 DELTA (cod. 0521C030)
Safety wire (3mm x 60 cm), Ring spring catch (max. capacity load 60Kg) (Cod. 0521A010)
"C" Clamp GQUICK with "Fast Lock" connection ¼ turn (max. load 80Kg) (cod. 0521A014)

Dimensions (LxDxH)
projector 430 x 285 x 570 mm

Weight 24 Kg



Packaging Dimensions (LxDxH)
530 x 500 x 660 mm

Weight 30 Kg

1- TECHNICAL FEATURES

Delta 5 RGB R

108 X 1W Luxeon type LEDS (36 Red, 36 Green, 36 Blue)
2.400 Lumens / 2940 Lux at 5 m (spot lenses)
RGB color generation / 16 million colours
Colour temperature variable on a linear range (3.200°K÷5.500°K)
No infrared emission / no ultraviolet emission
LEDs average lifespan: 100.000 hours
Optical units can be interchanged by users (spot / medium /wide)
Interface: OLED display + 4 buttons / infrared remote control
Control signals: USITT DMX 512 USITT serial digital signals
15 DMX channels
Independent operation (Master / Slave)
Programmable automated playback (7 days)
Movement on 3 axes : Pan 320° / Tilt1 160°(Motorized); Tilt2 135°(Manual)
Safety-locking system
IP65 protection level
Professional HARTING / ILME sockets (IP65 protection rating)
Full range AC 90-260V, 50-60Hz power supply
Operating ambient temperature -10° / 40°
Weight: 24 Kg

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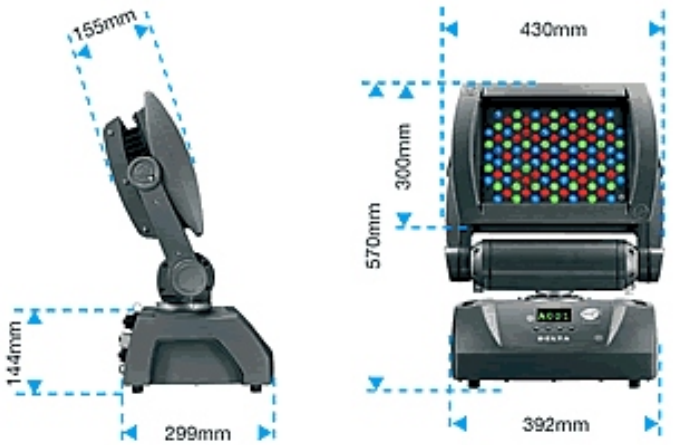
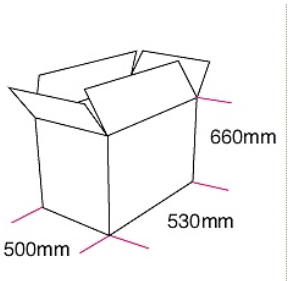


Dimensions (LxDxH)
projector 430 x 285 x 570 mm

Weight24 Kg



Packaging Dimensions (LxDxH)
530 x 500 x 660 mm

Weight 30 Kg

1- TECHNICAL FEATURES

Delta 7 RGB R

108 X 1W P4 type LEDS (36 Red, 36 Green, 36 Blue)
7.200 Lumens / 4.446 Lux at 5 m (spot lenses)
RGB color generation / 16 million colours
Colour temperature variable on a linear range (3.200°K÷5.500°K)
No infrared emission / no ultraviolet emission
LEDs average lifespan: 100.000 hours
Four interchangeable optical units (spot / medium flood /wide flood / very wide flood)
Interface: OLED display + 4 buttons / infrared remote control
Control signals: USITT DMX 512 USITT serial digital signals
15 DMX channels
Independent operation (Master / Slave)
Programmable automated playback (7 days)
Movement on 3 axes : Pan 320° / Tilt1 160°(Motorized); Tilt2 135°(Manual).
Safety-locking system
IP65 protection level
Professional HARTING / ILME sockets (IP65 protection rating)
Full range AC 90-260V, 50-60Hz power supply
Operating ambient temperature -10° / 40°
Weight: 24 Kg

ACCESSORIES

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Safety wire (3mm x 60 cm), Ring spring catch (max. capacity load 60Kg) (Cod. 0521A010)
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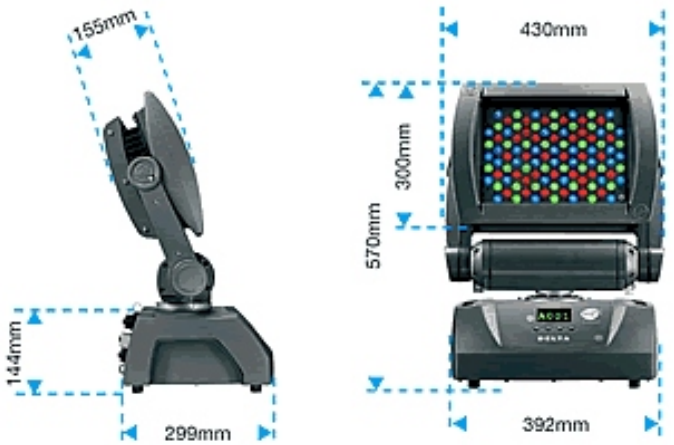
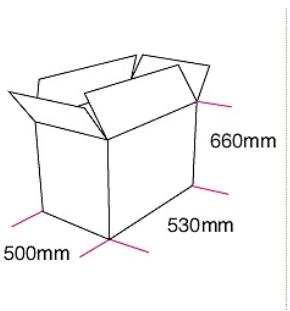


Dimensions (LxDxH)
projector 430 x 285 x 570 mm

Weight24 Kg



Packaging Dimensions (LxDxH)
530 x 500 x 660 mm

Weight 30 Kg

2- IMPORTANT SAFETY INFORMATION

2.1 Fire prevention:

-Never locate the fixture on any flammable surface.
-Minimum distance from flammable materials: 1 m.
-Minimum distance from the closest illuminable surface: 1 m.
-Replace any blown or damaged fuses only with those of identical value. Refer to the wiring diagram if there is any doubt.
-Connect the projector to mains power via a thermal magnetic circuit breaker.

2.2 Prevention of electric shock:

-High voltage is present inside the unit. Isolate the projector from the mains supply prior to performing any function which involves touching the inside of the unit.
-The level of technology inherent in the DELTA R requires the assistance of specialised personnel for all servicing. Please refer to an authorised D.T.S. service centre.
-A good earth connection is essential for proper functioning of the projector.
Never connect the unit without proper earth connection.
-The fixture should be located in places with a good air ventilation.

2.3 Protection against direct light radiation:

-Never turn the unit on if any of the lenses or the glass lenses protection is damaged.
-Never look directly the LEDs when they are on.

2.4 Safety:

-The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.
-Always use a second safety chain to sustain the weight of the unit in case of the failure of the main fixing point.
-The external surface of the unit, at various points, may exceed 80°C. Never handle the unit until it's on.
-Never install the fixture in an enclosed area lacking sufficient air flow.
-The ambient temperature should not exceed 40°C.

2.5 Level of protection against the penetration of solid and liquid matter:

-The projector is classified as an ordinary appliance and its protection level against the penetration of solid and liquid matter is IP 65.

.

3- VOLTAGE AND FREQUENCY:

Delta R can operate at 90-270V, 50 or 60 Hz.

4- INSTALLATION:

Delta R may be either floor or ceiling mounted.
For floor mounting installations, the unit is supplied with four rubber mounting feet on the base.
For ceiling mounted installations, we reccommend the use of appropriate clamps to fix the unit to the mounting surface.
The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hung it. The structure should also be sufficiently rigid so as not to move or shake whilst the Delta R is moving.
The Delta R is fitted with 4 fixing points on the bottom used to attach accessories (clamps, hooks, etc.) With a fast lock closure/release system (1/4 turn) to fix the fixture in any position.

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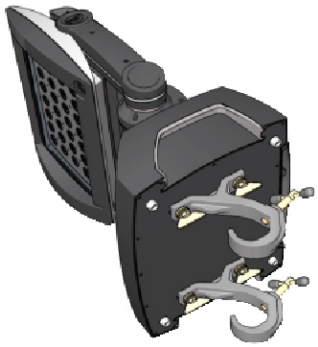
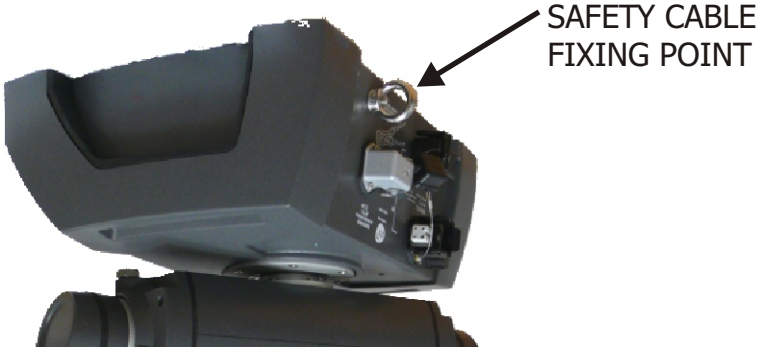


4.1 Safety cable:

We recommend the use of a safety cable or chain connected to the Delta R and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail. Make sure that the iron cable or chain can bear the weight of the entire unit.
You may attach the safety chain to the holes located on the base of the fixture, as shown in the picture below.



4.2 Risk of fire:

Each fixture produces heat and must be installed in a well-ventilated position. The minimum recommended distance from flammable material is 1m. Minimum distance from the object being illuminated is 1 m.

4.3 Ambient temperature:

The projector should never be installed in places that lack a constant air flow. The ambient temperature should NOT exceed 40°C.

5- MAINS CONNECTION:

Delta R can operate at 90-270V, 50 or 60Hz.
For connection purposes, ensure that your plug can handle at least 300W power consuption.

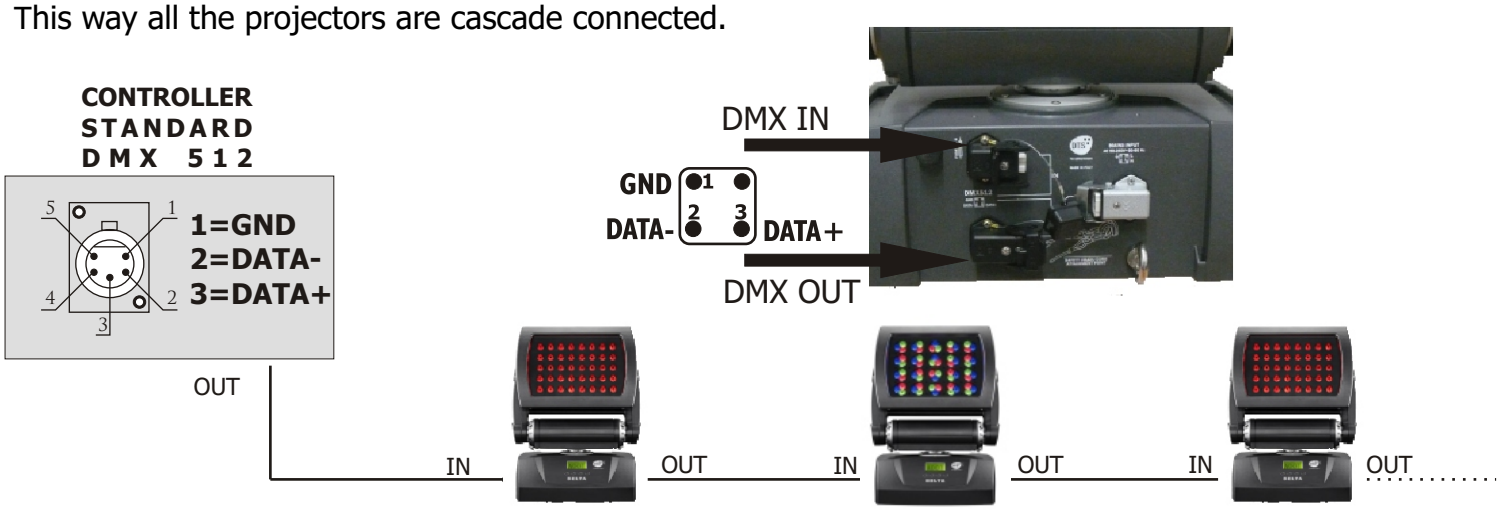
Strict adherence to regulatory norms is strongly Recommended.

5.1 Protection:

The use of a thermal magnetic circuit breaker is recommended for each Delta R.
A good earth connection is essential for the correct operation of the projector.

6- DMX SIGNAL CONNECTION:

The unit operates using a digital DMX 512 (1990) signal. Connection between the control box and the projector or between projectors must be carried out using a two pair screened ø0.5 mm cable and a CANNON XLR 5 or 3 pole connector.
Ensure that the conductors do not touch each other. Do not connect the cable ground to the XLR chassy. The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.
This way all the projectors are cascade connected.



P.S:
If the display showing the DMX address flashes, then one of the following errors has occurred:
- DMX signal not present
- DMX reception problem

6.1 DMX Addresses:

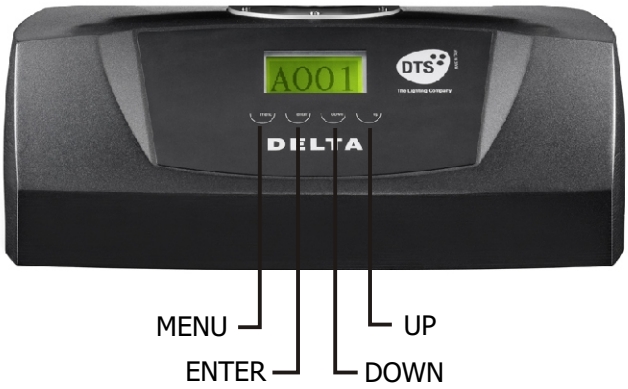
DELTA R has 15 DMX control channels.
Here below are described the DMX channels addressing for the controller:

Projector 1	A001	
Projector 2	A016	If you want to select the next projector, just add "15"
Projector 3	A031	
…..	A….	
projector 6	A091	

6.2 Selelcting the DMX address:

1) Press the UP-DOWN key until you reach the required DMX address. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now controlled by the new DMX address.

TIPS: if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.



7- Movement

The projector has a maximum movement of 320° for Pan,160° for Tilt 1 and 135° for tilt 2 (7 mechanical steps 22,5° each).
DO NOT place any obstructions in the path of the projector's movement.

Tilt 2 mechanical regulation

8- DISPLAY FUNCTIONS

DISPLAY FUNCTIONS

The DELTA R display panel shows all the available functions . Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.

DELTA SOFTWARE RELEASE 1.72

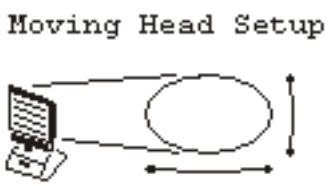
1)GLOBAL SETTING MENU

LANGUAGE
DEFAULT PAGE
SECURITY
DEFAULT SETTING
SET DATE
SET TIME
UPDATE
DOWNLOAD
ABOUT

2)MODE SETTING MENU

MODE DMX
MODE RECORDER
MODE MASTER
MODE SLAVE
MODE IR
MODE MANUAL
MODE TWILIGHT

3)MOVING HEAD SETUP MENU

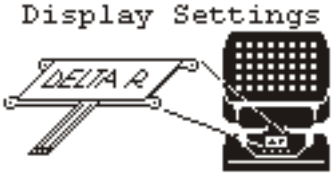


PAN MIN
PAN MAX
TILT MIN
TILT MAX
CALIBRATE PAN
CALIBRATE TILT
INVERT PAN
INVERT TILT
SWAP PAN & TILT
ENCODER
RESET PAN & TILT
SPEED PAN & TILT

4)LED SETUP MENU

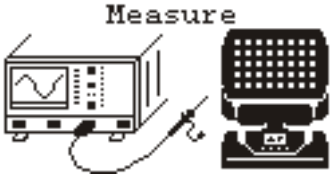
COLOUR MODE
WHITE BALANCE
BOOST DRIVING
MIN RGB
MAX RGB
SMOOT FILTER
PWM FREQUENCY

5)DIPLAY SETTINGS MENU



CONTRAST
FLIP DISPLAY
SCREEN SAVER

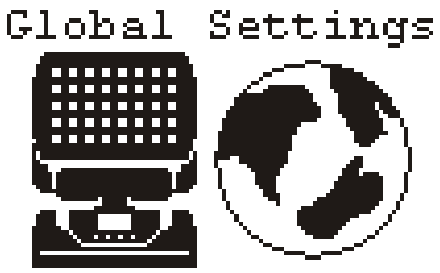
6)MEASURE MENU



LIFE
DMX
VOLTAGE
TEMPERATURE
TWILIGHT

1)GLOBAL SETTING MENU

LANGUAGE
DEFAULT PAGE
SECURITY
DEFAULT SETTING
SET DATE
SET TIME
UPDATE
DOWNLOAD
ABOUT



A001 — Menu — Up-Down — **GLOBAL SETTING** — ENTER

Language

Up-Down — ENTER — Up-Down — Up-Down

LANGUAGE SELECTION
This menu allows to set the language

Set Language English	English = Default

ENTER

Default Page

Up-Down — ENTER — Up-Down — Up-Down

DEFAULT PAGE SELECTION
This menu allows to set the visualisation for the start up page

Set Default Page Four Digit A001 Status	Four Digit = DMX address visualisation Status = DMX / Color Mode / Boost Power / Security

ENTER — ENTER

Security

Up-Down — ENTER — Up-Down — Up-Down

SECURITY PASSWORD
This menu allows to select a security password to lock the user's settings

Security Unlocked Enter Security Code 0 0 0 0 Confirm Security Code 0 0 0 0	Default 0000 = no password Universal Unlock code = 2903

ENTER

Default Setting

Up-Down — ENTER — Up-Down — Up-Down

DEFAULT SETTINGS
This menu allows to set the unit to the company settings

Restore Main Settings ENTER to CONFIRM & Reboot	GAME,TIMER and WHITE SETTING will not be changed

ENTER — ENTER

Set Date

Up-Down — ENTER — Up-Down

DATE SETTING
This menu allows to set the day of the week the month and the year

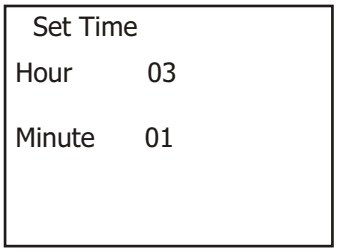
Set Date Year 2007 Month Jan Day of the month 01 Day of the week Mon	Date settings for Stand Alone mode

ENTER

Up-Down Set Time

TIME SETTING
This menu allows to set the unit's on board clock for STAND ALONE MODE

ENTER Up-Down



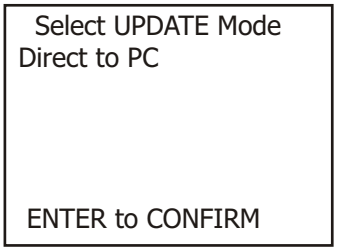
Real time internal clock setting

ENTER

Up-Down Update

UPDATE MENU
This menu allows to upgrade the uni's software by computer or remote control

ENTER Up-Down



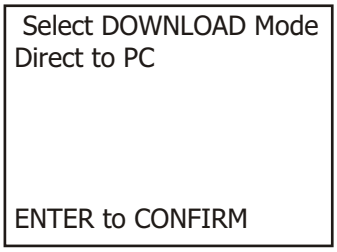
Update the unit's software from PC by cable

ENTER

Up-Down Download

DOWNLOAD MENU
This menu allows to save unit's programs into computer

ENTER Up-Down



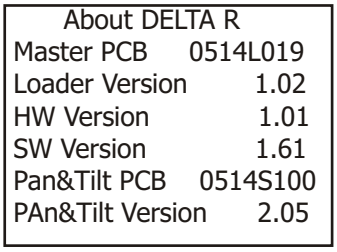
Download the unit's program to PC by cable

ENTER

Up-Down ABOUT

ABOUT MENU
This menu shows information about unit's hardware and software

ENTER Up-Down



Unit's hardware and software info

ENTER

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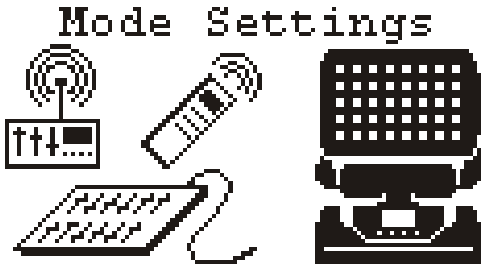
2)MODE SETTING MENU

MODE DMX
MODE RECORDER
MODE MASTER
MODE SLAVE
MODE IR
MODE MANUAL
MODE TWILIGHT



A001 ☞ Menu ☞ Up-Down **MODE SETTINGS** ☞ ENTER

☞ Up-Down Mode DMX ☞ ENTER ☞ Up-Down

Set Address DMX

001

Address range 001-489 ☞ ENTER

DMX ADDRESS SELECTION
This menu allows to set the unit's DMX address.

☞ Up-Down Mode Recorder ☞ ENTER ☞ Up-Down

RECORDER MODE SETTING
This menu lets you create 2 different chases, CPR1 and CPR2 (16 steps each) that will then run in Master Mode.
Two different recording modes are available:
1)Manual Recording Mode
2)DMX Recording Mode

RECORDER Mode
Input Mode MANUAL
Select Chase CPR1

1)Manual Recording Mode

RECORDER MANUAL
CPR1 STEP 01 EDIT
PAN 016 TILT 255
SHUTTER 009 DIMM 017
R 016 G 016 B 000
WHITE 012 CTC 000
MACRO 000

In Manual Recording Mode,it is possible to create and store the steps of the chase by using the unit display panel and buttons. ☞ ENTER

Three different options are available:
1)EDIT = Lets you modify and store new values for all the channels on the selected Step.
2)WIEV MEM = Lets you see the existing programmed steps of the chase
3)SET LAST = Lets you set the last step to be run on the chase.

---

2)DMX Recorder Mode
To program CPR1 and CPR2 by using a DMX controller, 3 more DMX channels are needed in addition to the 15 channels necessary to control the unit.
So that in RECORDER mode (via DMX) the unit will need 18 channels to be correctly programmed.
The 3 new DMX channels are:
DMX channel 16 = STEPS channel
From 0 - 15 = VIEW DMX, the unit shows the values received from the DMX controller in that moment.
From 16 – 255, the previously programmed steps (16 steps from 01 to 16) are displayed.
DMX channel 17 = VIEW / EDIT / SET LAST channel
If channel 16 (STEPS channel) is set to value 0 - 15, the DMX channel 17 has no functions.
If channel 16 (STEPS channel) is set to value 16 - 255, the DMX channel 17 has the following functions:
From 0 - 19 = VIEW MEM, the unit shows the previously programmed steps.
From 20 - 234 = EDIT, the unit runs the configuration given by the DMX controller in that moment.

RECORDER Mode
Input Mode DMX
Select Chase CPR1
Warning 18 channels !

RECORDER DMX
CPR1 STEP 01 EDIT
PAN 016 TILT 255
SHUTTER 009 DIMM 017
R 016 G 016 B 000
WHITE 012 CTC 000
MACRO 000

In DMX Recording Mode,it is possible to create and store the steps of the chases by using an external DMX controller. ☞ ENTER

WARNING !
To program CPR1 and CPR2 by using a DMX controller, 3 more DMX channels are needed in addition to the 15 channels necessary to control the unit.

With the STEPS channel it is possible to select the step to create, while with REC channel it is possible to store the configuration on the selected step.-
From 234 - 255 = SET LAST, the unit runs the configuration given by the DMX controller in that moment closing the Program as last step.
With the REC channel it is possible to record the selected step as last step to be run on the Program.
DMX channel 18 = REC channel
REC channel saves the configuration given by the DMX controller in the selected step: you change the DMX value from 0 to 255 (the display shows "WRITING" indicating that the step has been recorded). We suggest to keep the REC channel set to 0 and to run through the 255 only once you have decided to save the new configuration. If CPR1 or CPR2 are not closed, by indicating the last step (Edit channel between 235-255), all 16 steps will be played through in playback mode, even if not programmed.

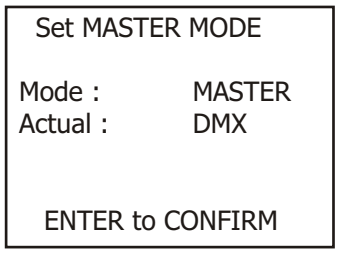
Up-Down Mode Master ENTER Up-Down

MASTER MODE SETTING
This menu allows to set Delta R as master unit (No DMX signal must be present on unit's DMX input panel) .
The unit will run in automatic mode without needing of an external controller.
Different chases are selectable by user

CPR1/CPR2/CPR1&2
Chases with 16 steps previously created in RECORDER mode.
Time and Wait time selectable by user

CRNB
Rainbow colours effect.
Time and Pan&Tilt selectable by user

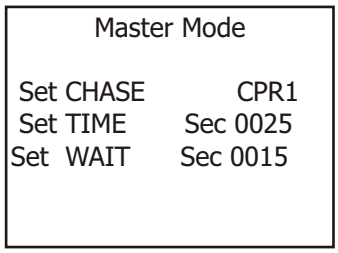
CUE 1-9
Color Macros with fixed colors
Pan&Tilt selectable by user



ENTER

The Delta set as MASTER, sends DMX signal to all the other units connected to the same DMX line

Up-Down



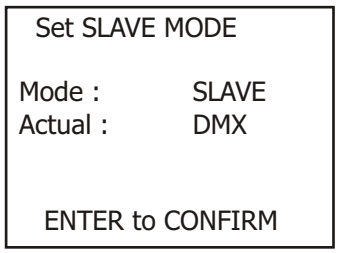
ENTER

By setting all the units connected to the MASTER, to DMX address 1, they will be sinchronized with the Master unit following the chase selected on it, including TIME, WAIT and Pan&Tilt position of the MASTER unit.

By setting all the units connected to the MASTER, as SLAVE unit (see SLAVE mode), they will be sinchronized with the Master unit only for TIME and WAIT time, but running their own chase CPR1/CPR2 with dedidicated Pan&Tilt position, colors and effects.

Up-Down Mode Slave ENTER Up-Down

SLAVE MODE SETTING
This menu allows to set the Delta R as slave unit.
DMX signal must be present from MASTER unit in order to run in SLAVE mode.



ENTER

The SLAVE unit receives DMX signal from the MASTER unit

By setting all the units connected to the MASTER as SLAVE units, they will be sinchronized with the Master unit only for TIME and WAIT time, but running their own chase CPR1/CPR2 with dedidicated Pan&Tilt position, colors and effects.

Up-Down Mode IR ENTER Up-Down

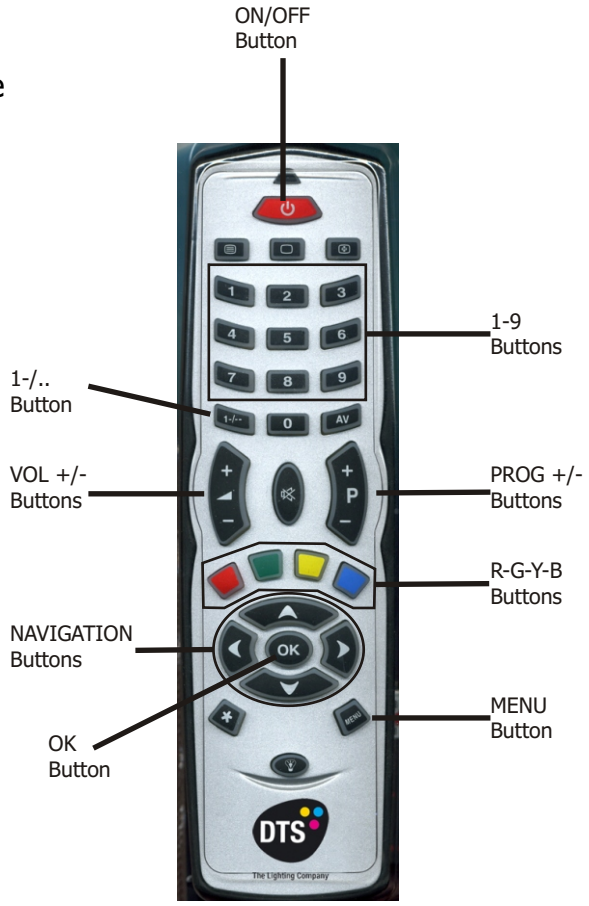
IR MODE SETTING
By activating IR mode on Delta unit it will be possible to navigate trought the unit functions by using the D.T.S. infrared remote control (D.T.S. Code :0514L008).

Set IR MODE	
Mode :	IR
Actual :	DMX
ENTER to CONFIRM	

The unit is controlled by the infrared remote control ENTER

INFRARED REMOTE CONTROL

By activating IR mode on Delta unit it will be possible to navigate trought the unit functions by using the D.T.S. infrared remote control (D.T.S. Code :0514L008).



Infrared remote control functions:

ON/OFF and MUTE buttons
In Master/Slave mode let you stop the games running.
Master and slave units will go in Stand-by mode

1-9 buttons
Let you select the chase to run (CPR1/CPR2/CRNB/CUE 1-6)

1-/.. Button
Let you select the chase to run (CUE 7-9)

VOL +/-
No function

PROG +/-
Let you scroll between the selectable chases

RED/GREEN/YELLOW/BLUE buttons
Direct acces to cues for Red/Green/Blue/Yellow colour.
Red=CUE1 / Green=CUE3 / Yellow=CUE2 / Blue=CUE5

Navigation buttons
Same as UP/DOWN on unit display

OK button
Same as ENTER on unit display

MENU button
Same as MENU on unit display

Up-Down Mode Manual ENTER Up-Down

MANUAL MODE SETTING
This menu lets you control Delta unit in manual mode by using the unit display.
In MANUAL mode, no external controller is needed.

Set MANUAL MODE	
Mode :	MANUAL
Actual :	DMX
ENTER to CONFIRM	

MAN Mode Enter VALUES	
Channel	Value
PAN H	128

In MANUAL mode it is possible to adjust all the unit functions by using UP/DOWN and ENTER buttons: ENTER

PAN H
PAN L
TILT H
TILT L
SPEED PAN&TILT
SHUTTER
DIMMER
RED
GREEN
BLUE
WHITE
CTC
MACRO
FUNCTION
RESET

Up-Down TWILIGHT MODE ENTER Up-Down

TWILIGHT MODE MENU
This menu allows to set the unit in Twilight mode.
Twilight mode lets you turn ON and OFF the unit at a specific clock time (including day of the week) and/or at a specific twilight level.
The Twilight mode makes use of a twilight sensor located on the front panel near unit display.
To know the twilight ambient level value measured from the sensor, scroll the unit menu till MEASURE Mode and select Twilight.

Set TWILIGHT MODE	
Mode :	TWILIGHT
Actual :	DMX
ENTER to CONFIRM	

TWILIGHT Mode	
ACTION	CPR1
LEVEL ON 100	OFF 150:
TIME CONDIT	INCLUSIVE
DAY Mon	START 22:00
TIME ON	10:00

ENTER

The unit is switched on and off at the desired twilight level or/and at a specific clock time.

ACTION :
Lets you select the desired function in twilight mode.
You can choose between: DMX / CPR1 / CPR2 / CPR1&2 / CRNB / CUE 1-9 /

LEVEL ON and OFF :
Lets you select the desired twilight levels for:
Twilight mode ON and OFF.

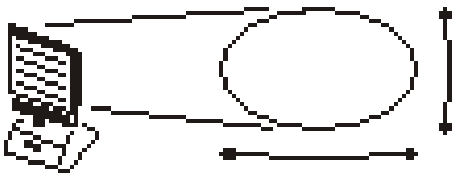
TIME CONDITION:
Four different options are available:
1) INACTIVE
Clock time (START) and Time on period (TIME ON), are inactive.
In this condition the unit goes ON only if the twilight level is valid
2)COMBINED
Clock time (START), Time on period (TIME ON) and Twilight level are active.
In this condition, the unit goes ON only if all the parameters are valid.
3)INCLUSIVE
Clock time (START), Time on period (TIME ON) and Twilight level are active.
In this condition, the unit goes ON also if only one of the paramete is valid.
4)EXCLUSIVE
Clock time (START) and Time on period (TIME ON), are active, while Twilight level is inactive.
In this condition, the unit goes ON only if Clock time (START) is valid.

---

3)MOVING HEAD SETUP MENU

PAN MIN
PAN MAX
TILT MIN
TILT MAX
CALIBRATE PAN
CALIBRATE TILT
INVERT PAN
INVERT TILT
SWAP PAN & TILT
ENCODER
RESET PAN & TILT
SPEED PAN & TILT

Moving Head Setup



A001 Menu Up-Down **MOVING HEAD SETUP** ENTER

A001 MOVING HEAD SETUP

Menu Up-Down ENTER

Pan Min

Up-Down ENTER Up-Down

PAN MINIMUM POSITION
This menu allows to set the Pan minimum position (Default =000)

Setting Pan Min

Pan Min : 000

Range 000-255
Default = 000

ENTER

Pan Max

Up-Down ENTER Up-Down

PAN MAXIMUM POSITION
This menu allows to set Pan maximum position (Default = 255)

Setting Pan Max

Pan Man : 000

Range 255-000
Default = 255

ENTER

Tilt Min

Up-Down ENTER Up-Down

TILT MINIMUM POSITION
This menu allows to set the Tilt minimum position in degrees (Default =000)

Setting Tilt Min

Tilt Min : 000

Range 000-255
Default = 000

ENTER

Tilt Max

Up-Down ENTER Up-Down

TILT MAXIMUM POSITION
This menu allows to set the Tilt maximum position (Default = 255)

Setting Tilt Max

Tilt Max : 000

Range 255-000
Default = 255

ENTER

Calibrate Pan

Up-Down ENTER Up-Down

PAN CALIBRATION
This menu allows to calibrate Pan home position (Default = 105)

Calibrating Pan

Pan : 105

Range 000-255

ENTER

Calibrate Tilt

Up-Down ENTER Up-Down

TILT CALIBRATION
This menu allows to calibrate Tilt home position (Default = 128)

Calibrating Tilt

Tilt : 105

Range 000-255

ENTER

Up-Down Invert Pan — ENTER Up-Down

PAN INVERSION
This menu allows to set the Pan movement.
Normal or Inverted

Set PAN INVERTION
Pan : Normal
Actual Normal

Pan movement Normal or Inverted
Default = Normal — ENTER

Up-Down Invert Tilt — ENTER Up-Down

TILT INVERSION
This menu allows to set the Tilt movement.
Normal or Inverted

Set TILT INVERTION
Tilt : Normal
Actual Normal

Tilt movement Normal or Inverted
Default = Normal — ENTER

Up-Down Swap Pan&Tilt — ENTER Up-Down

PAN&TILT SWAP
This menu allows to invert the control of Pan with the control of Tilt.

Set Pan/Tilt SWAPPING
Swap : Normal
Actual Normal

Pan control inverted with Tilt control and vice versa
Default = Normal — ENTER

IMPORTANT: (During PAN/TILT MIN,PAN/TILT MAX and PAN/TILT CALIBRATE setting,PAN/TILT INVERT and PAN/TILT SWAP are disabled

---

Up-Down Encoder — ENTER Up-Down

ENCODER SETTING
This menu allows to enable/disable the auto-repositioning function for Pan and Tilt

Set Encoder Status
Encoder : Active
Actual Active

Pan/Tilt auto-repositioning system enabled or disabled
Default = Active — ENTER

Up-Down Reset Pan & Tilt — ENTER

PAN&TILT RESET
This menu allows to reset Pan and Tilt Motors

Resetting Pan & Tilt
PRESS ENTER To RESET Pan & Tilt

Pan &Tilt motors reset — ENTER

Up-Down Speed Pan & Tilt — ENTER Up-Down

PAN & TILT MAXIMUM SPEED
This menu allows to set the maximum speed for Pan & Tilt movement.

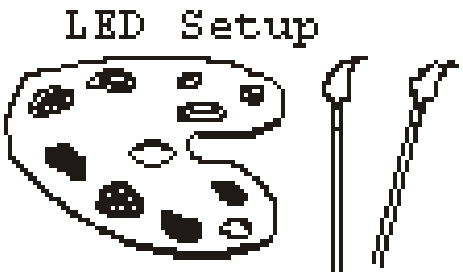
Set SPEED MAX P&T
Speed MAX % 100

Pan&Tilt maximum motor speed
Selectable between 25-100% — ENTER

---

4)LED SETUP MENU

COLOUR MODE
WHITE BALANCE
BOOST DRIVING
MIN RGB
MAX RGB
SMOOT FILTER
PWM FREQUENCY



A001 ☞ Menu ☞ Up-Down **LED SETUP** ☞ ENTER

☞ Up-Down Colour Mode ☞ ENTER ☞ Up-Down

COLOUR MODE
This menu allows to select the LED'S colour mode control system between RGB, CMYK or HSV

```
Set Colour Mode
RGB
CMYK
HSV

Actual        RGB
```

RGB Mode (Default)
Ch7 = Dimmer / Ch8 = Red Ch9= Green / Ch10= BLue

CMYK Mode
Ch7 = Black / Ch8 = Cyan
Ch9= Magenta / Ch10= Yellow

HSV Mode
Ch7 = Nu / Ch8 = Hue
Ch9= Saturation / Ch10= Value

☞ ENTER

☞ Up-Down White balance ☞ ENTER ☞ Up-Down

WHITE BALANCE
This menu allows to select the levels for Red, Green and blue obtaining a custom White

```
Setting WHITE
RED          255
GREEN        255
BLUE         255
```

The Custom White can be Recall by setting DMX channel 11 (WHITE) in the range 172-213

☞ ENTER

☞ Up-Down Boost Driving ☞ ENTER ☞ Up-Down

BOOST DRIVING
This menu allows to increase the LED's current from 350mA to 500 mA

```
Setting LED BOOST
BOOST Status

Active

Warning TEMPERATURE
PROTECTION ACTIVATED
```

Whit BOOST active,the LED's current is set to 500mA (30% more gain).
Default = Disable
NTC thermal protection active.

☞ ENTER

☞ Up-Down Min RGB ☞ ENTER ☞ Up-Down

RGB MINIMUM VALUES
This menu allows to select the minimum levels for Red,Green and blue

```
Setting RGB  Min

Min RED    :  000
Min GREEN  :  000
Min BLUE   :  000
```

These settings have priority on Master Dimmer (DMX channel 7)

☞ ENTER

☞ Up-Down Max RGB ☞ ENTER ☞ Up-Down

RGB MAXIMUM VALUES
This menu allows to select the maximum levels for Red,Green and blue

```
Setting RGB  Max

Max RED    :  000
Max GREEN  :  000
Max BLUE   :  000
```

These settings have priority on Master Dimmer (DMX channel 7)

☞ ENTER

Up-Down Smooth Filter ENTER Up-Down

SMOOTH FILTER VALUE
This menu allows to select the value of the delay (in millisecons) for RGB channels reaction to DMX or Program variation.
001=2.5 ms delay (Fast response)
100=250 ms delay (Slow response)

Set Smooth Filter
Filter Value: 010
ENTER to CONFIRM

Range = 001 / 100
Default = 10
001 = 2.5mS (Istant response to DMX variation)
100 = 250mS (Smooth response to DMX variation)

ENTER

Up-Down PWM frequency ENTER Up-Down

PWM FREQUENCY VALUE
This menu allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings

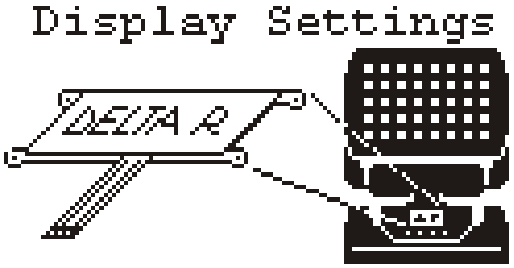
Set PWM Frequency
427 Hz
1000 Hz
2000 Hz
4000 Hz
6000 Hz
Actual 427 Hz

5 different PWM frequencies available.
Default = 427 Hz

ENTER

5)DISPLAY SETUP MENU

CONTRAST
FLIP DISPLAY
SCREEN SAVER



A001 Menu Up-Down **DISPLAY SETUP MENU** ENTER

Up-Down Contrast ENTER Up-Down

DISPLAY CONTRAST
This menu allows to select display's contrast level.

Contrast 7
0▯1▯2▯3▯4▯5▯6▮7▮8▮9▮

Range = 0-9

ENTER

Up-Down Flip Display ENTER Up-Down

DISPLAY FLIP
This menu allows to reverse display's reading depending on the mounting position
(On the ground or suspended).

Flip Select
A

Default = On the ground

ENTER

Up-Down Screen saver ENTER Up-Down

SCREEN SAVER
This menu allows to activate the screen saver.

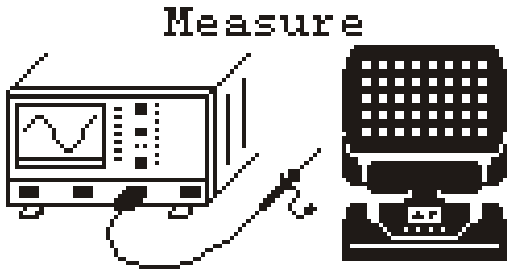
SCREEN SAVER SETTING
Screen Type None
Screen Time (sec):005

Screen saver selectable between None (default) and Blank.
Screen saver activating time selectable between 005 / 180 seconds

ENTER

6)MEASURE MENU

LIFE
DMX
VOLTAGE
TEMPERATURE
TWILIGHT



A001 Menu Up-Down **MEASURE MENU** ENTER

Up-Down Life ENTER Up-Down

LIFE TIME
This menu shows the total UNIT LIFE TIME (reset not possible) and the RGB life TIME (reset possible)

```
Measure Life
Delta R Total LIFE
Days  Hours  Min  Sec
   1     19   47   55
UP/DW Change Measure
```

Total Unit Life Time
Reset not possible
ENTER

```
Measure Life
Delta R RED LIFE
Days  Hours  Min  Sec
   0      5   22   30
UP/DW Change Measure
```

To reset Red life time, keep pushed Enter button for more than 5 seconds
ENTER

```
Measure Life
Delta R GREEN LIFE
Days  Hours  Min  Sec
   0      4   37   15
UP/DW Change Measure
```

To reset Green life time, keep pushed Enter button for more than 5 seconds
ENTER

```
Measure Life
Delta R BLUE LIFE
Days  Hours  Min  Sec
   0      4   06   53
UP/DW Change Measure
```

To reset Blue life time, keep pushed Enter button for more than 5 seconds
ENTER

Up-Down Dmx ENTER Up-Down

DMX
This menu shows the DMX channel levels

```
Measure DMX
Start Channels Values
001  000 000 000 000
005  000 000 000 000
009  000 000 000 000
013  000 000 000 000
```

DMX channel levels as received from DMX line

ENTER

Up-Down Voltage ENTER Up-Down

VOLTAGE
This menu shows the different Voltage levels for every electronic circuit inside the unit

```
Measure VOLTAGE

V Motor        36,9
V Power       160,5
V Internal     17,6
V Oled         13,2
```

All the values are espressed in Volt

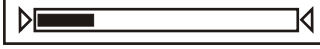
ENTER

Up-Down Temperature ENTER Up-Down

TEMPERATURE
This menu shows the NTC sensor temperature.

```
Measure TEMPERATURE

Celsius    20,5
```



LED's temperature monitor

ENTER

Up-Down Twilight ENTER Up-Down

TWILIGHT
This menu shows the twilight level.

```
Measure TWILIGHT

Value :    0314
```

Light sensor Twilight level (Located on the front panel of the unit)

ENTER

9- OPENING UP THE PROJECTOR HOUSING:

It is possible to inspect the inside of the projector by removing the covers as shown below.

Attention: REMOVE MAINS POWER PRIOR TO ACCESSING THE PROJECTOR'S INTERNAL COMPONENTS.

Proceed as per the pictures below

9.1- Arms

Remove these two screws on both arm sides

9.2- Base

Remove the 12 screws located on the base

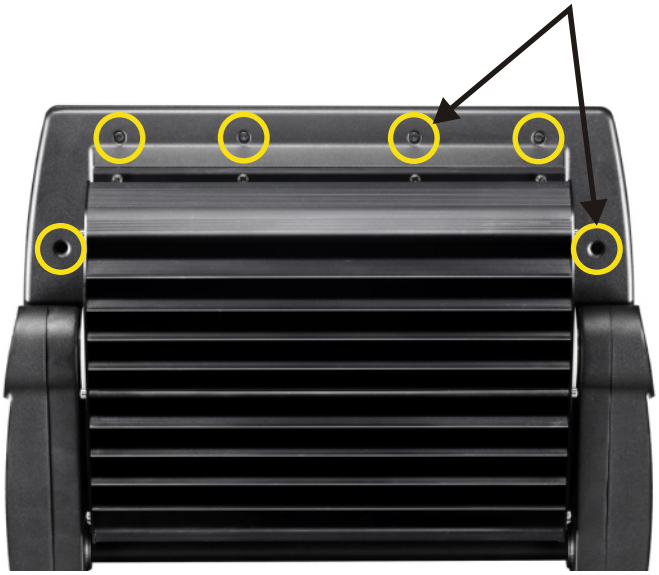
10- CHANGHING THE LENSES

Delta R Full Color

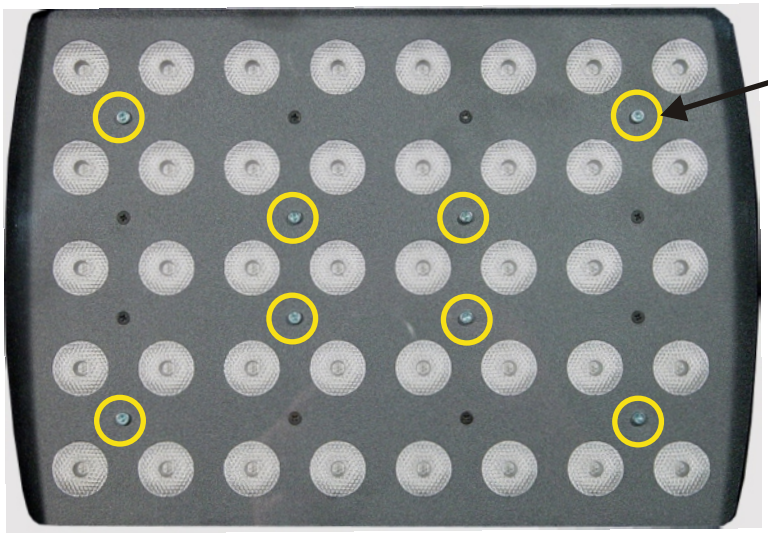
Optical Lenses set can be interchanged by users.
Four different models are available: (spot / medium flood /wide flood / very wide flood)
Lenses set spot (cod. 03.LK.008)
Lenses set medium (cod. 03.LK.001)
Lenses set wide (cod. 03.LK.002)
Lenses set very wide (cod. 03.LK.011)

To change the lenses set, proceed as per the pictures below

Remove these 12 screws on both sides of the rear head assembly



Remove the top head cover



Remove these 8 screws and change the panel

ATTENTION:
Never touch LEDs and Lensens with hands

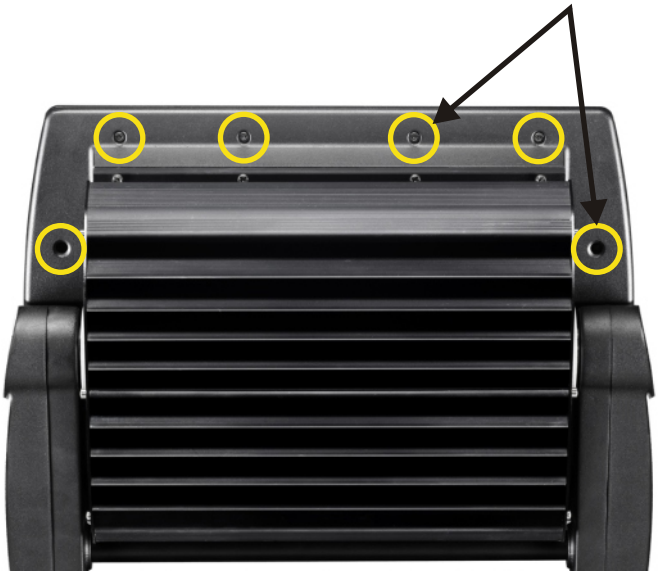
10- CHANGHING THE LENSES

Delta R Triled

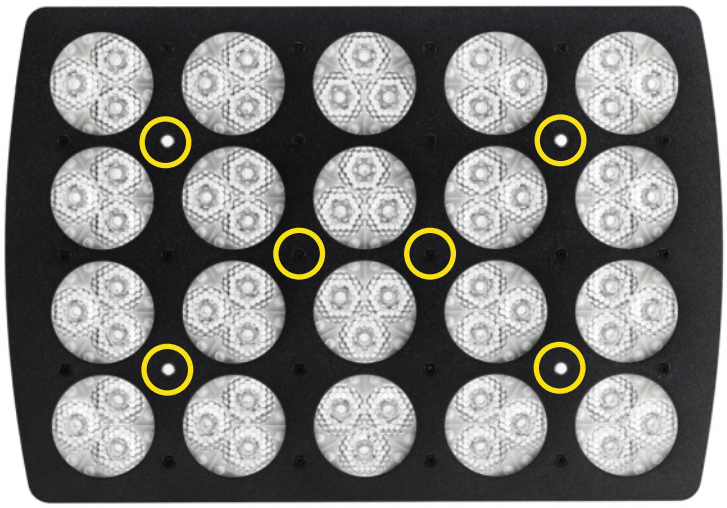
Optical Lenses set can be interchanged by users.
Three different models are available: (spot / medium /wide)
Lenses set spot (cod. 03.LK.008)
Lenses set medium (cod. 03.LK.001)
Lenses set wide (cod. 03.LK.002)

To change the lenses set, proceed as per the pictures below

Remove these 12 screws on both sides of the rear head assembly



Remove the top head cover



Remove these 6 screws and change the panel

ATTENTION:
Never touch LEDs and Lensens with hands

11- PERIODIC CLEANING:

Front lenses Glass

The dust can reduce the luminous output substantially. Regularly clean the front lenses glass using a soft cotton cloth, dampened with a specialist glasses cleaning solution.

12- PERIODIC CONTROLS:

Mechanical parts:
Periodically check all mechanical parts and the gaskets, replacing them if necessary.

Electrical components:
Check all electrical components for correct earthing and proper attachment of all connectors, refastening if necessary.

Fuse replacement:
Locate the fuse, which protect the electronics, in the base of the DELTA R.
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary.
Attention: Disconnect mains power prior to removing the projector housing.

13- DMX PROTOCOL

15 CHANNELS MODE

1 PAN msb 320°
2 PAN lsb
3 TILT msb 180°
4 TILT lsb
5 SPEED MOVEMENT
6 SHUTTER
7 DIMMER
8 RED
9 GREEN
10 BLUE
11 WHITE (Preprogrammed whites at different color temperature)
12 CTC
13 COLOURS MACRO
14 FUNCTIONS
15 RESET

DMX CHANNEL	1	Parameter: **PAN msb**

DMX CHANNEL	2	Parameter: **PAN lsb**

DMX CHANNEL	3	Parameter: **TILT msb**

DMX CHANNEL	4	Parameter: **TILT lsb**

DMX CHANNEL	5	Parameter: **MOVEMENT SPEED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-255					**Vector mode from fast to slow**

DMX CHANNEL	6	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-19	**14**				**Open**
20-29	**24**				**Black-out**
30-119					**Strobe at variable speed(from slow to fast)**
120-149					**Pulse open at variable speed(from slow to fast)**
150-179					**Pulse close at variable speed(from slow to fast)**
180-204	**192**				**Random Strobe (Master and RGB active)**
205-229	**218**				**Random Strobe (Full)**
230-244	**238**				**PAn&Tilt movement in Black-out**
245-255	**250**				**Open**

DMX CHANNEL	7	Parameter: **DIMMER** **NOTE: IN CMYK MODE Ch7 = BLACK**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional dimmer**

DMX CHANNEL	8	Parameter: **RED** **NOTE: IN CMYK MODE Ch8 = CYAN** **IN HSV MODE Ch8 = HUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	9	Parameter: **GREEN** **NOTE: IN CMYK MODE Ch9 = MAGENTA** **IN HSV MODE Ch9 = SATURATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	10	Parameter: **BLUE** **NOTE: IN CMYK MODE Ch10 = YELLOW** **IN HSV MODE Ch10 = VALUE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Proportional colour**

DMX CHANNEL	11	Parameter: **WHITE (Pre-programmed White at diff. color temperature)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-43	**21**				**No Function**
44-85	**66**				**Full (Red-Green-Blue at Full)**
86-127	**105**				**White DTS**

IF CHANNEL 14 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

128-171	**150**	**Custom White Recall**
172-213	**192**	**White Balance(White Balance programmed on Unit's Menu)**
214-255	**234**	**White CTC (Channel 12 CTC enabled Linear color temp. Correction: 3000K-7000K)**

IF CHANNEL 14 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

128-171	**150**	**Custom White Create (RGB levels selectable by DMX)**
172-213	**192**	**White Balance(White Balance programmed on Unit's Menu)**
214-255	**234**	**White CTC (Channel 12 CTC enabled Linear color temp. Correction: 3000K-7000K)**

DMX CHANNEL	12	Parameter: **CTC (Color temperature correction)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function

IF CHANNEL 11 (White) = WHITE CTC (Dmx range value 214 - 255)

0-255	**Linear color temp. Correction: 0 = 3000K / 128 = 5500K / 255 = 7000K**

IF CHANNEL 11 (White) = NO FUNCTION (Dmx range value 0 - 43)

0-255	**Smooth RGB linear Hue correction**

DMX CHANNEL	13	Parameter: **COLOUR MACROS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					**No Function**
15-29					**Macro 1**
30-44					**Macro 2**
45-59					**Macro 3**
60-74					**Macro 4**
75-89					**Macro 5**
90-104					**Macro 6**
105-119					**Macro 7**
120-134					**Macro 8**
135-149					**Macro 9**
150-164					**Macro 10**
165-179					**Macro 11**
180-194					**Macro 12**
195-209					**Macro 13**
210-225					**Macro 14**
226-239					**Macro 15**
240-255					**Macro 16**

DMX CHANNEL	14	Parameter: **FUNCTIONS (Recall,Create and Store the Custom white)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79		**Custom White Recall (Enable CH 11 for Custom white Recall)**			
80-160		**Custom White Create (Enable CH 11 for Custom white Creation)**			
161-255		**Custom White Store (Store the Custom White created)**			

DMX CHANNEL	15	Parameter: **RESET (Pan&Tilt Reset)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-15	**8**			**No Functions**	
16-255	**120**			**Pan&Tilt Reset**	

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